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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.           | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------|------------------|
| 09/893,735  | 06/29/2001  | Olli Piirainen       | P 281483<br>2010736US/BR/HIER | 3326             |
| 909 / 7590  | 11/18/2004  |                      | EXAMINER                      | ZHENG, EVA Y     |
| PILLSBURY WINTHROP, LLP<br>P.O. BOX 10500<br>MCLEAN, VA 22102 |             |                      | ART UNIT                      | PAPER NUMBER     |
|   |             |                      | 2634                          |                  |

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/893,735             | PIIRAINEN, OLLI     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Eva Yi Zheng           | 2634                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 29 June 2001.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) 1-12 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/28/01</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

***Claim Objections***

1. Claims 1, 4, 5, and 10-12 are objected to because of the following informalities:

a) Regarding claim 1:

On line 5, please change phrase: "the symbols" to -- symbols --.

b) Regarding claim 4:

On line 5, please change phrase: "the symbols" to -- symbols --.

On line 9, please change phrase: "time-space block" to --space-time block  
--.

On line 23, please change phrase: "the retransmitted blocks" to --  
retransmitted blocks --.

c) Regarding claim 5:

On line 3, please change phrase: "the symbols" to -- symbols --.

On line 16, please change phrase: "the format" to -- a format--.

On line 18, please change phrase: "the retransmitted blocks" to --  
retransmitted blocks --.

On line 18-19, please change phrase: "the coding" to --coding--.

d) Regarding claim 10,

On line 3, please change phrase: "the TDMA" to -- TDMA --.

On line 3, please change phrase: "the multiple access method" to -- a  
multiple access method --.

e) Regarding claim 11,

On line 3, please change phrase: "the CDMA" to -- CDMA --.

On line 3, please change phrase: "the multiple access method" to -- a multiple access method --.

f) Regarding claim 12,

On line 3, please change phrase: "the OFDM" to -- OFDM --.

On line 3, please change phrase: "the multiple access method" to -- a multiple access method --.

Appropriate correction is required.

***Allowable Subject Matter***

2. Claims 1, 4, 5, and 10-12 would be allowable if rewritten to overcome the objections, set forth in this Office action.
3. Claims 2, 3, 6-9 are objected as dependent upon objected independent claim 1 and 5.
4. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art teaches or suggests data transmission and retransmission system between two transceivers, comprising more than one antenna for transmitting and receiving data, dividing symbols into blocks, transmitting one block per each antenna from the first transceiver to the second transceiver, acknowledge if the blocks has been transmitted successfully, if not, storing the blocks in memory of the second transceiver, retransmitting the same blocks in the same format from the first transceiver,

combining the retransmitted blocks and the blocks in the memory of the second transceiver to form space-time block coding.

**Conclusion**

5. This application is in condition for allowance except for the following formal matters:

See description above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Yi Zheng whose telephone number is (571) 272-3049. The examiner can normally be reached on 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-879-9306.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

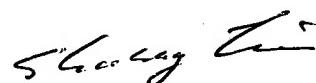
**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Eva Yi Zheng  
Examiner  
Art Unit 2634

November 3, 2004



SHUWANG LIU  
PRIMARY EXAMINER